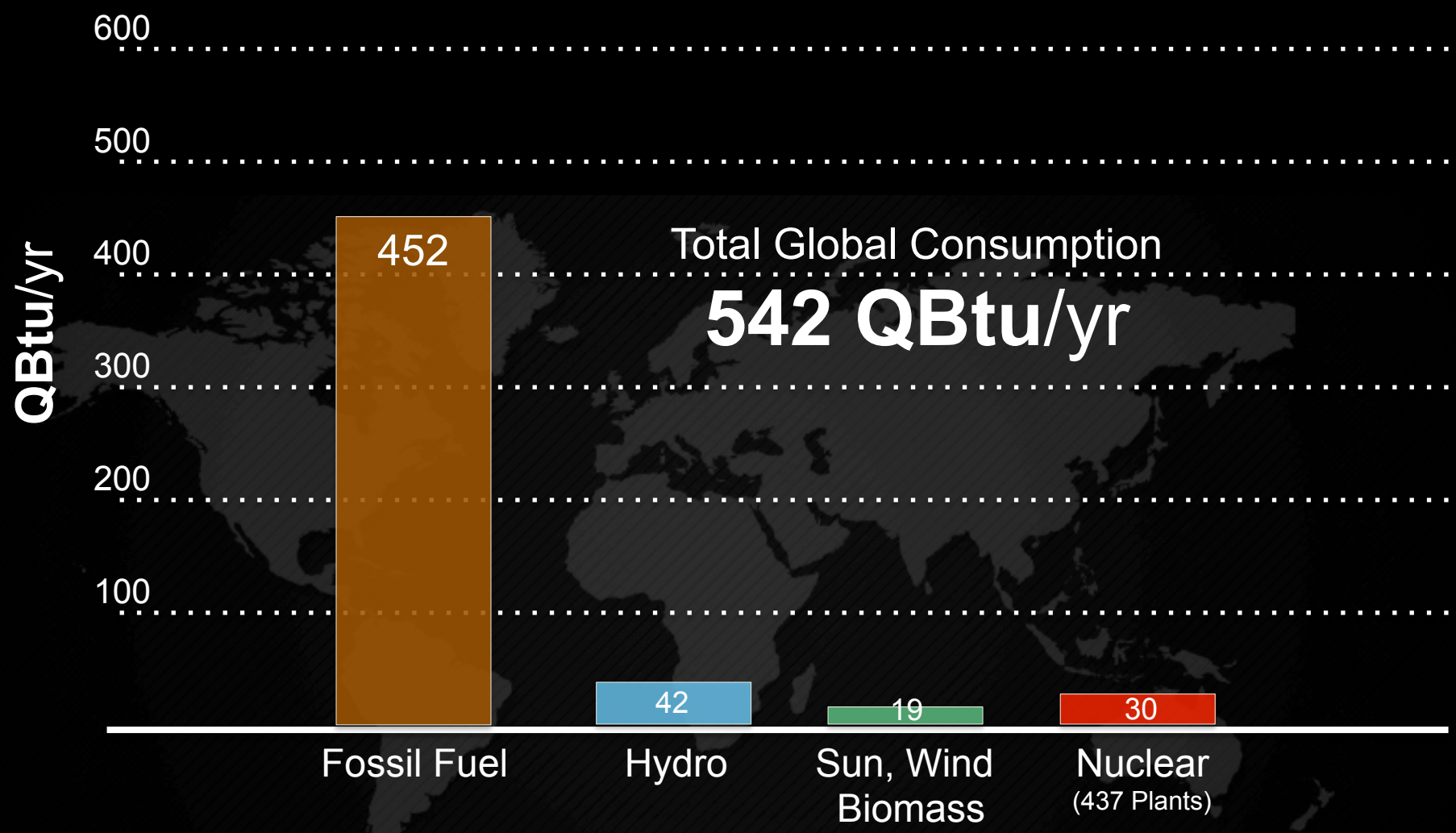
CALIFORNIA'S COMMITMENT

Zero Net Energy for Residential Buildings by 2020
Zero Net Energy for Commercial Buildings by 2030

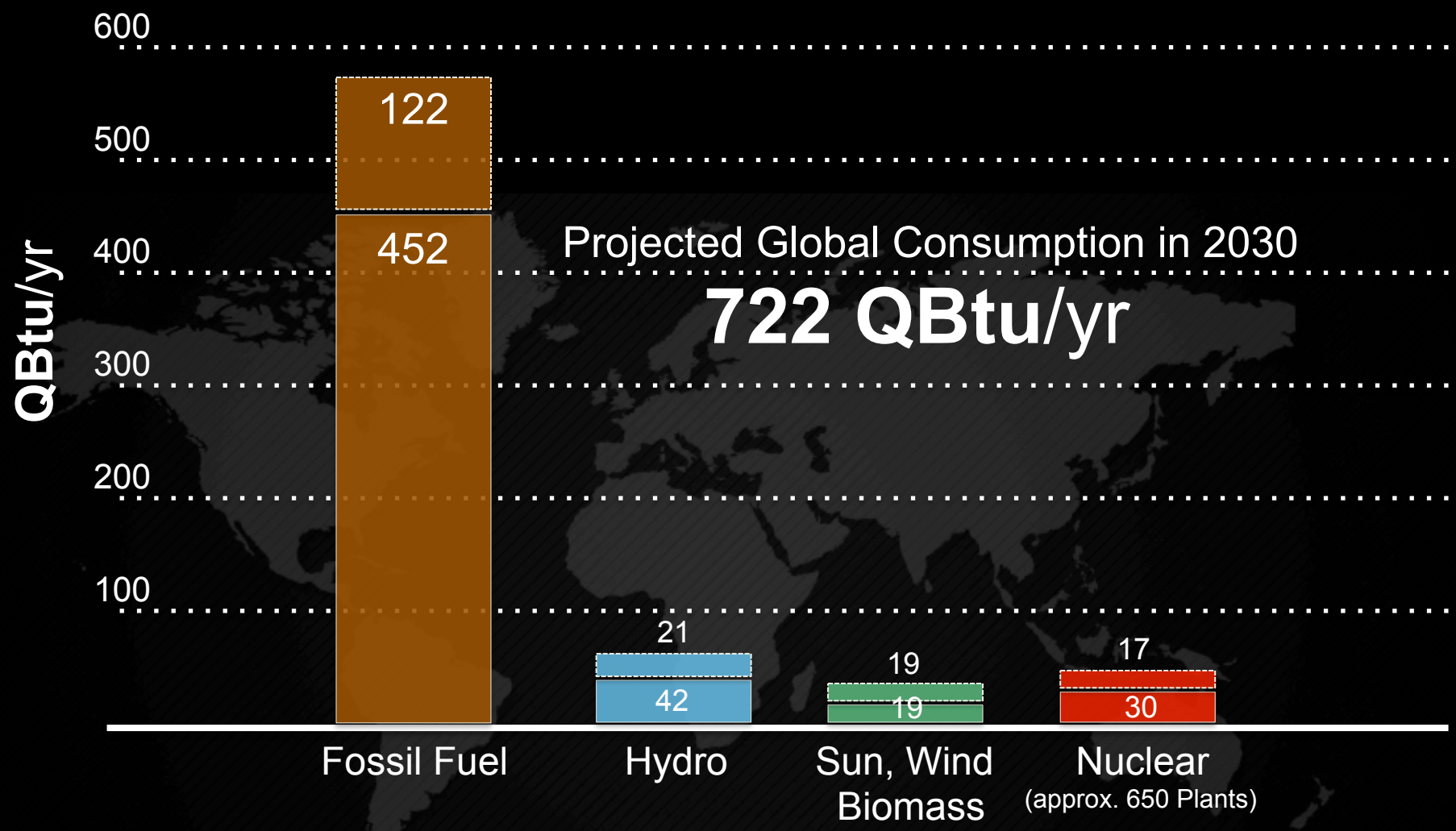
GLOBAL IMPLICATIONS

WHY?



WORLD ENERGY CONSUMPTION 2012

Source: US Energy Information Administration, IEO



WORLD ENERGY CONSUMPTION 2012 - 2030

Source: US Energy Information Administration, IEO

THE OPPORTUNITY

By 2030,

1.6 billion

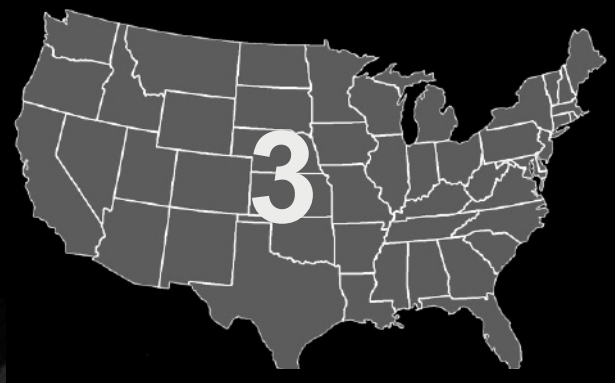
additional people will live in cities.

By 2030,

900 billion ft^2 (84 billion m^2)

of new and rebuilt buildings
will be constructed in cities worldwide.

Sources:
UN Habitat, *State of the World's Cities 2010/2011*; McKinsey Global Institute, *Urban World: Cities and the rise of the consuming class*, 2012.



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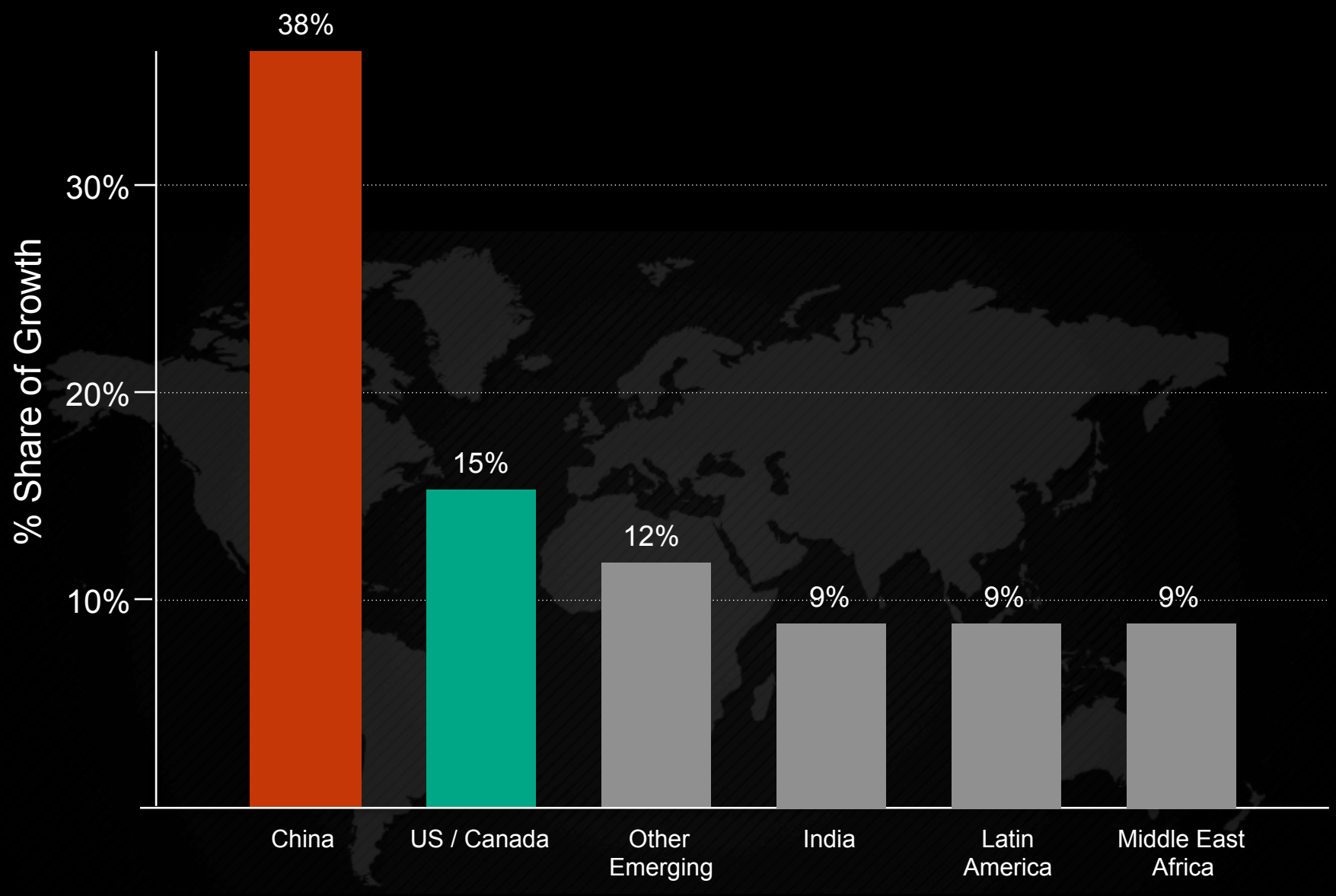


Global Floor Space Growth (2012 – 2030)

Source:
McKinsey Global Institute, *Urban World: Cities and the rise of the consuming class*, 2012.

California
China

Proposed Definition for Zero Net Energy

- Newly constructed residential and commercial buildings
- One definition of ZNE
- Incorporates the societal value of energy (TDV)
- Must be fail proof – a path for all buildings to meet ZNE

Proposed Definition for Zero Net Energy

Zero Net Energy – a newly constructed building that meets California Building Energy Efficiency Standards, and the value of on-site, or off-site, renewable energy equals the value of the energy consumed by the building annually.

Residential Zero Net Energy

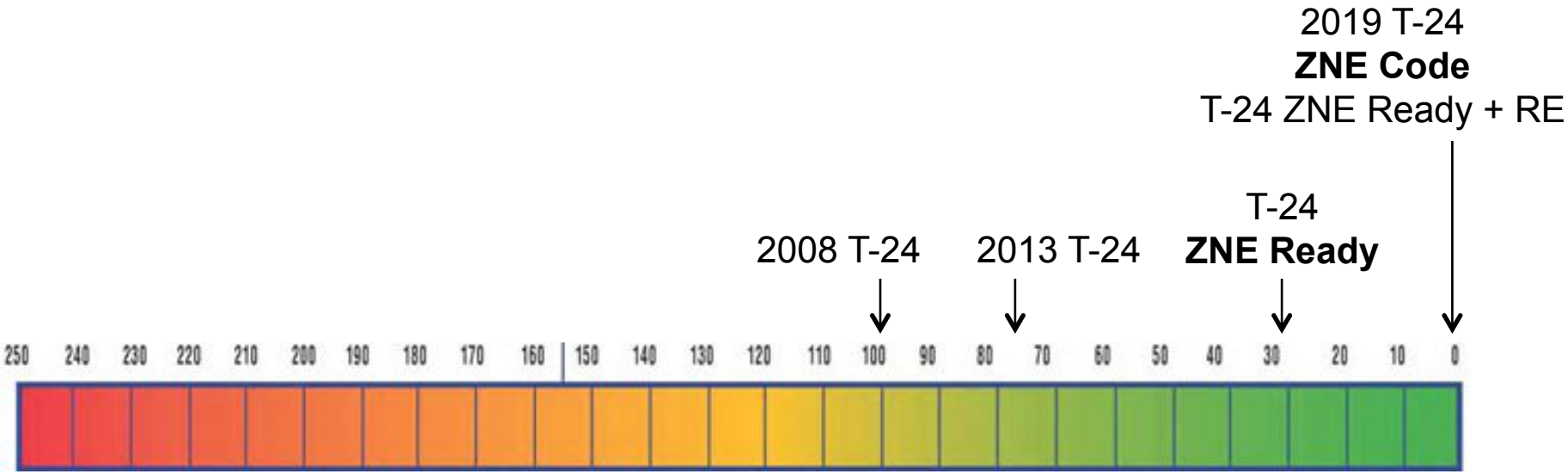
Building Energy Efficiency Standards:

- Optimizes energy efficiency and demand response (TDV).
- Equates to a CA HERS rating of approximately HERS 30.

Renewable Energy Requirement:

- Incorporate on-site renewable energy (TDV valued) to offset remaining energy consumed after efficiency (inexpensive), or
- Purchase renewable energy to offset remaining energy consumed after efficiency (expensive).
- Equates to a CA HERS rating of HERS 0.

California HERS Rating



The CHALLENGE

Reducing barriers to ZNE

303,477

California homebuyer's took advantage of the $8,000 Federal First Time Homebuyers Tax Credit from 2009 – 2010.

Proposed Incentive for Zero Net Energy

$8,000 *homebuyer* rebate for purchasing a new California ZNE home – three year program. Goal is

10,000

new ZNE homes purchased

(incorporating on-site renewables)

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